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MEMORANDUM

SUBJECT: Review of the Silvanus Preliminary Assessment Report,
Volume I (October 1992)

TO: Diane Huffman
RCRA/RCOM

FROM: Randy Rohrman
RCRA/GEOL

Introduction

As requested, the document entitled "Environmental Priorities Initiative - Preliminary Assessment, Volume I - Silvanus Products, Inc." was reviewed for technical adequacy. This document is dated October 1992 and was prepared by Terracon Environmental, Inc. of Kansas City, Missouri, under Jacobs Engineering Group, Inc. of Lenexa, Kansas.

During the review, it was determined that there are several significant issues relating to both past and present waste management practices at the Silvanus facility that should be examined in more detail.

Specific Comments

1. Page 2, Section 2.2, 2nd Paragraph, 1st Sentence:

The term downgradient is used primarily to refer to the direction of groundwater flow; it should be deleted from this sentence and replaced with down or downward.

2. Page 3, Section 2.4.1, 1st Paragraph, 4th Sentence:

The reference to SWMU No. 5 should be changed to SWMU No. 6.

3. Page 4, 4th Paragraph of Section 2.4.1:

The report states that during an 18-month period Silvanus purchased 3,757 pounds of lead for the production of linotype slugs, and that 3,460 pounds of lead were recycled. Since the

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report has presented these quantities of lead, it should expand on the usage and management of lead by Silvanus. For instance, the difference in the amount of lead purchased and the amount recycled could represent (1) linotype slugs that are produced and retained by the facility, (2) a consequence of the 18-month time period selected, or (3) the generation of a significant quantity of waste lead, the management of which should be addressed during the Preliminary Assessment.

4. Page 6, Section 3.1, 1st Paragraph; also Figure F-1:

It is stated that the four municipal water supply wells are located within a distance of one-quarter mile of the facility. Because with this approximation the supply wells could be located very close to the Silvanus facility, the report should state the distance more precisely. Additionally, the locations of the municipal water supply wells should be shown on Figure F-1.

The report states that the four water supply wells operated by the City of Ste. Genevieve are downgradient of the site. The report should clarify as to whether the supply wells are downgradient of the facility with respect to groundwater flow (as is implied by the use of the term downgradient), or whether they are located in an area where the ground surface elevation is lower with respect to the Silvanus facility.

5. Table 2, SWMU Number 2 - Flammable Material Storage Area:

The Summary of Recommendations included with the PA Report recommended that Silvanus provide secondary containment for this SWMU; GEOL agrees with this recommendation. In addition, there exists the possibility of a release occurring from the drums through acts of vandalism since the drums are exposed through the chain-link fence surrounding the SWMU (Photo #7), and access to the site is not controlled (page 2, Section 2.2 of the PA Report).

6. Table 2, SWMU Numbers 4 and 5 - Satellite Collection Drums:

GEOL has noted several issues that should be resolved with respect to past and present waste management practices relating to these SWMUs. These issues include the following:

► Descriptions of the nature and quantity (by weight) of the wastes managed using these SWMUs should be clarified. For example, the PA Report states in Table 2 that the drums are used to accumulate "contaminated cleaning rags" (under heading **SWMU NAME**), while it also states that the wastes managed are "cleaning solvents and printer inks" (under heading **WASTES MANAGED**). On page 3 of the PA Report (Section 2.4.1, 2nd Paragraph) it is stated that excess ink is placed in the drum.

► Table 2 of the PA Report states that full drums of waste from SWMUs 4 & 5 are generated every six months; however, two Hazardous Waste Manifest forms and a log, included in Appendix G of the PA Report, indicate the generation of 822 pounds of this waste during the period from 3-17-92 through 4-30-92, a period of approximately six weeks (assuming removal of all previously accumulated waste on 3-17-92). With regard to the nature of these wastes, the weight of the wastes (two drums weighing 657 pounds removed on 3-17-92 and two drums weighing 822 pounds removed on 4-30-92) indicate the likelihood of a substantial quantity of liquid wastes being managed with SWMUs 4 & 5. Further, the Safety-Kleen Pre-Qualification Evaluation for the "waste rags" describes the physical state of the waste as a "paste" (Appendix H of the PA Report). The PA Report should clarify the physical nature of the wastestreams managed with these SWMUs, especially if liquid wastes are involved.

► It is recommended that Silvanus adequately determine the chemical composition of any liquid wastes managed using SWMUs 4 & 5, since some inks can contain toxic substances.

► Table 2 of the PA Report states that SWMUs 4 & 5 began operation in 1992, and that prior to 1992 these wastes were disposed as part of the "general refuse wastestream". The PA Report should address the details regarding management and disposal of this hazardous waste prior to 1992, including where it was disposed, since it is classified as RCRA hazardous waste, and the facility has been in continuous operation since 1927 (PA Report, Executive Summary).

7. Table 2, SWMU Number 6 - Waste Fixer/Developer Drum:

This SWMU, consisting of one 55-gallon drum, acts as a collection point for several sources of waste photographic fixer and developer solutions. GEOL has noted several issues that should be resolved with respect to the wastes managed with SWMU No. 6. These issues include the following:

► The Safety-Kleen Pre-Qualification Evaluation for this waste (included in Appendix H of the PA Report) classifies the waste as RCRA D001 (ignitable) due to "oil". It is important to note that photographic fixer solutions typically become "spent" when the silver content exceeds from 2 to 6 grams/liter, or at even greater concentrations if ammonium thiosulfate is used in the solution (as is the case at Silvanus; see Safety-Kleen Pre-Qualification waste analysis for the waste fixer/developer solution in PA Report Appendix H).

It is recommended that Silvanus be required to adequately determine the chemical composition of its waste fixer/developer solutions, since waste photographic fixer may contain high

concentrations of silver, which is a RCRA toxic waste (D011) at concentrations greater than 5 mg/l (40 CFR §261.24).

► In Table 2 of the PA Report, the dates of operation of this SWMU are listed as 1992 to present, and until the end of 1991 this waste was discharged to the sanitary sewer. In summarizing past waste disposal practices, the PA should determine if Silvanus notified the operators of the wastewater treatment plant of this practice, and also whether the treatment plant was capable of properly treating this waste prior to discharge into the Mississippi River.

8. Table 2, SWMU Numbers 7 & 8 - Safety-Kleen Parts Washers:

The waste produced by the parts washers is petroleum naphtha, RCRA hazardous waste D001 (ignitability). In Table 2 of the PA Report, it is stated that the dates of operation for these SWMUs are 1992 to present, and that prior to 1992 these wastes were disposed as part of the "general refuse wastestream".

The PA Report should provide details regarding past waste management practices of the spent petroleum naphtha, including where it was disposed.

9. Figure F3:

The stormwater collection system at the south end of the Silvanus facility is shown by the dashed line on Figure F3. One of the three inlets to this system is located close to Area of Concern "A", and one inlet is located close to SWMU No. 2. Because of the proximity of the inlets to these areas, and when consideration is given to past hazardous waste management practices at this facility, GEOL recommends some type of environmental sampling near the discharge point of this system (Point "M" on Figure F3). The exact sampling procedure would depend on the physical conditions at Point "M", and analytical parameters would depend on more complete characterization of hazardous wastestreams that have been generated by Silvanus.

Conclusions and Recommendations

The Revised Closure Plan dated March 30, 1992 for the Former Drum Storage Area (SWMU Number 1) was reviewed by GEOL and appears to be technically adequate; it was included in the PA Report as Appendix F.

The primary concern with the Silvanus facility is with past hazardous waste management practices as detailed in the preceding comments. Questionable hazardous waste management and disposal has apparently occurred until only recently in 1992, and since the facility has been in continuous operation since 1927 it

should be determined how and where potentially large volumes of hazardous wastes were disposed.

The PA Report states in Section 2.4.2 on Page 4 that vinyl and paper scrap is sent to the county landfill; it should be determined if this constitutes the disposal practice for the "general refuse wastestream" referred to with regard to the pre-1992 disposal of the waste petroleum naphtha and the waste cleaning rags and ink.

In addition to the recommendations presented in this memorandum, GEOL concurs with the Summary of Recommendations that were included with the PA Report.

If there are any questions regarding the content of this memorandum, please contact Randy Rohrman at extension 7543.